THE ECONOMIC EFFECTS OF CAPITAL CONTROLS

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This report concerns the effects of possible controls on the inflow of foreign capital into the United States. It was requested by Senator John C. Danforth, Chairman of the Subcommittee on International Trade of the Senate Committee on Finance.

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The sharp rise in budget deficits in recent years has been accompanied by a steep appreciation of the dollar, high net capital inflows from abroad, and record trade deficits. It is now widely understood that these phenomena are closely interrelated. 1/ This paper analyzes the effects that capital controls might have on the economy and trade.

INTRODUCTION

In fiscal year 1984, the federal government incurred a total budget deficit of $185.3 billion, or 5.2 percent of GNP for that year. Current budget forecasts by the Congressional Budget Office (CBO) suggest that large deficits will persist in the absence of policy changes. Federal deficit spending, while partially offset by the aggregate budget surpluses of state and local governments, must be accommodated by borrowing from private saving. But domestic private sector saving (at prevailing interest rates) falls short of accommodating both credit demands in the private sector (such as investment) and dissaving in the public sector (the budget deficit). As a result, the U.S. economy seeks to spend more than its income allows.

This gap between domestic spending and income is now being bridged by borrowing from abroad, which results in capital inflows. In fact, during the first half of the 1980s, the U.S. capital account shifted from net outflows of U.S. capital to unprecedented net capital inflows from abroad. In 1984 capital inflows amounted to some $100 billion. 2/ In 1985 the United States will become a net debtor nation for the first time since 1914.

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1. For further detail on the relationship between fiscal deficits, the exchange rate, and the trade balance, see Congressional Budget Office, *The Economic and Budget Outlook, Fiscal Years 1986-1990* (February 1985), pp. 79-113. See also Statement of Dr. Rudolph G. Penner, Director, Congressional Budget Office, before the Subcommittee on Economic Stablization, House Committee on Banking, Finance, and Urban Affairs, July 18, 1985.

But increased demand for U.S. assets (loans to U.S. borrowers from abroad are considered assets by the foreigners who make them) also expands the international demand for the dollars needed to pay for them, and as a result, the price of dollars relative to other currencies--the exchange rate--also must rise. Between January 1980 and March 1985, the real effective exchange rate of the dollar rose by almost 60 percent; declines since the March peak have rolled back only about 15 percentage points of this increase. The dollar's high value makes foreign goods relatively cheaper in the United States and U.S. goods relatively more expensive abroad. As a result, the United States incurred a current account deficit of $101.5 billion in 1984, and these record trade deficits may persist, unless current policies are changed. 3/

Many policymakers are now searching for ways to ameliorate the adverse effects of these trade deficits. One contemplated means is restrictions on capital movements--such as taxes on the earnings of U.S. assets held by foreigners or taxes on the assets themselves--in the hope of reducing capital inflows and the demand for dollars, which, in turn, would depreciate the exchange rate and reduce the trade deficit. This staff working paper discusses the probable economic effects of such capital controls. There are three primary findings. First, the existence of large, highly integrated financial markets, which trade in dollar assets abroad--the so-called "Euromarket" for dollars--and are beyond the direct control of U.S. authorities, might pose an insurmountable barrier to the effective enforcement of a capital control policy. Second, if successful, capital controls could raise U.S. interest rates. Higher interest rates might lower economic growth in the short-term and reduce the rate of investment and capital formation in the longer view, thereby lowering future standards of living. Finally, because capital controls would have uncertain effects on macroeconomic activity and would be difficult to enforce, their effects on the budget deficit would be ambiguous.

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2. This figure includes $30 billion in errors and omissions, or unreported capital inflows.

3. The current account is the sum of the merchandise and services trade balances. The terms "trade deficit" and "balance of trade" use in this report refer to the current account.

MACROECONOMIC IMPLICATIONS OF SUCCESSFUL CAPITAL CONTROLS

This section discusses the macroeconomic effects of capital controls, such as an interest equalization tax, presuming that such a policy could be successfully implemented. The next section addresses the implementation issue in greater detail.

If successful, capital controls would greatly reduce inflows of capital into the United States from foreign residents. This in turn would substantially lessen the demand for dollars, and therefore would tend to depreciate the exchange rate. A decline in the value of the dollar would increase net exports by making foreign goods more expensive in the United States and U.S. goods less expensive abroad. Other things being equal, the improvement in the export sector of the economy and import-competing industries would increase GNP and employment. Higher prices for imports, however, would trigger an increase in the U.S. inflation rate.

But other important effects might countervail these benefits. The inflow of capital from abroad has undoubtedly moderated upward pressure on U.S. interest rates, since foreign savings can satisfy the demand for loanable funds by U.S. firms, consumers, and the government. Restricting capital movements would reduce the supply of savings to meet this demand, thus leading to higher interest rates.

Higher interest rates would tend to dampen GNP growth, offsetting the stimulus afforded by higher net exports. In fact, the negative effect of higher interest rates on output and employment could countervail any positive benefit from increased net exports, although the distribution of these offsetting effects among industries would not be identical.

A tax on the deposits or earnings of foreign residents in the United States would afford some revenue to the government, but this, again, might be offset. A possible fall in GNP would worsen the deficit by reducing government tax revenues and increasing social insurance expenditures. Moreover, higher interest rates would increase the interest cost to the government of deficit financing.

If GNP were to fall, then U.S. imports would fall. This improvement in the current account would dampen the initial depreciation of the exchange rate. In addition, the foreign repercussions of U.S. capital

controls must be considered. Reduced imports by the United States would tend to lower the GNP of the major U.S. trading partners, especially since so much of their recent growth has stemmed from strong U.S. import demand. Lower foreign output and employment would in turn reduce the demand for U.S. exports. On the other hand, if capital controls kept more foreign capital in its host countries, then their interest rates would fall, leading to higher rates of foreign economic growth. Thus, the ultimate effects of U.S. capital controls on the trade deficit, the exchange rate, and real GNP are ambiguous because of offsetting influences. Less ambiguous, however, would be the resulting increase in interest rates and inflation.

Finally, and perhaps most important, higher U.S. interest rates would reduce domestic investment and long-term capital formation. Capital controls, therefore, would shift the "crowding-out" burden of high U.S. fiscal deficits from the export sector to domestic investment. If deficits crowded out investment in plant and equipment, the economy would suffer a long-term cost in the form of lower productivity and less economic growth.

THE ISSUE OF ENFORCEMENT

Capital controls can be evaded through a variety of means. Attempts to limit deposits by nonresidents or to reduce rates of return on their deposits often can be frustrated. Foreign residents can find domestic intermediaries to arrange deposits indirectly. Intermediaries can borrow abroad and deposit the proceeds in their own name in banks that cannot receive direct deposits from foreign residents. Domestic manufacturing and financial enterprises can expand their borrowing abroad, which has the same effect on the exchange market as banking deposits by nonresidents. This additional borrowing can be expected if capital controls result in higher domestic interest rates. In fact, higher U.S. interest rates would increase the attractiveness of lending to the United States, making circumvention of controls more profitable.

This problem is exacerbated by the existence of offshore financial markets--or Euromarkets. The U.S. dollar accounts for most of the activity in these international markets. The dollar is the dominant means of payment in international trade, the primary investment vehicle, and the most widely used form of foreign exchange held by central banks. Thus, segregating U.S. financial markets from foreign capital flows would be more difficult than controlling financial markets in other countries whose currencies play a smaller international role. Moreover, because of the dollar's unique position, dollar exchange rates are determined by world financial forces. The demand for dollars in Euromarkets has the potential to

lead to appreciation as does demand in the domestic market. That is, if foreign residents desired U.S. assets, they could evade U.S. capital controls by resorting to financial markets outside the United States.

To be sure, Eurodollar markets are not autonomous or unrelated to U.S. capital markets--at the very least, the rates of return offered in Eurodollar markets are related to the interest rate in the United States. Moreover, many Eurobanks hedge their dollar positions against exchange rate fluctuation, so that their transactions often have no net effect on the market for dollars. But since Eurobanks can offer U.S dollar-denominated assets, the demand for dollars to acquire these assets has the potential to lead to an appreciation of the dollar.

Foreign Experience with Capital Controls

Capital controls, such as taxes on foreign interest earnings, are but one type of exchange control that nations have imposed in an effort to regulate their transactions with the rest of the world. Many industrialized countries have resorted to direct controls on international capital movements. But a review of these experiences suggests that all of the nations face difficulties in enforcing and policing their capital control policies. Among others, West Germany, Switzerland, and Japan have imposed and later rescinded stringent capital controls in order to stem excessive capital inflows. The United States has also tried to implement capital control policies in the past.

West Germany. Between 1970 and 1973, West Germany gradually introduced controls designed to reduce the inflows of foreign capital in an attempt to regain monetary control and avoid inflation. These regulations increased in complexity over time, but were never completely successful, because of attempts at circumvention.

In mid-1970, West Germany imposed discriminatory minimum reserve requirements against the growth, and later the level, of nonresident deposits. Beginning in May 1971, the West German government required prior authorization for the sale to nonresidents of money market paper and certain fixed-interest securities. In practice, these regulations were not very successful, since it was too easy to find intermediaries who could channel funds directly to German banks. Domestic manufacturing and financial enterprises also responded to the regulation by greatly increasing their borrowing abroad, circumventing the intent of the restriction.

In response, in March 1972, the authorities required cash deposits for nonbank borrowing abroad. The requirement for prior authorization was gradually extended to cover all kinds of securities. By early 1973, administrative restrictions were placed on borrowing by nonbank enterprises from nonresidents, on certain types of direct investment from abroad, and on the sale of claims to nonresidents. Finally, prior approval was required (and usually denied) for the payment of interest on bank deposits to nonresidents.

In late 1973, following the depreciation of the mark relative to the dollar after the advent of floating exchange rates, the Federal Republic substantially reduced the capital controls then in force.

Switzerland. Switzerland has had a variety of capital controls in effect since 1971. Strict controls were imposed in early 1973 and again in early 1975. They included negative interest rates on Swiss franc deposits of nonresidents at an annual rate of 40 percent;[4] discriminatory minimum reserves, higher than those prevailing in Germany, on the growth and level of nonresident bank liabilities; requirements for banks to balance their position in foreign currency daily, not only overall but also vis-a-vis each of nine major foreign currencies; a limitation on the forward sale of Swiss francs by foreign residents; and a prohibition on nonresidents' investing foreign funds in fixed-interest securites denominated in Swiss francs between June 1972 and February 1974.

The Swiss authorities did not view the results of these controls as entirely satisfactory, nor did they possess a reliable measure of private nonmonetary capital flows. Since these measures did not reduce the volatility of short-term capital inflows, the Swiss authorities introduced additional measures in 1976. Further limitations were placed on interest payments on nonresidents' savings deposits denominated in Swiss francs; forward exchange regulations were tightened to reduce transactions in Swiss francs unrelated to trade; and substantially enlarged reporting requirements were introduced on banks' foreign assets and liabilities positions, both spot and forward. The sale of domestic and foreign Swiss franc securities to nonresidents however, has remained unrestricted since 1974 to forestall an excessive rise in interest rates.

Declining confidence in the dollar in the late 1970s led to further large inflows of capital into Switzerland. In February 1978, foreigners were prohibited from buying Swiss financial instruments, with the exception of a proportion of not more than 35 percent of total loan issues that could be

4. A negative interest rate is the rate that a depositor must pay a bank to hold his funds.

assigned to nonresidents; banks were required to cover on a day-to-day basis the total amount of their foreign exchange liabilities with foreign currency assets; and imports of foreign bank notes were restricted to the equivalent of 20,000 Swiss francs per person per quarter. In March 1978, Swiss franc holdings of foreign monetary authorities were made subject to the interest ban.

Despite these steps, the Swiss franc was appreciating substantially against the dollar and most other currencies by late 1978. In October 1978, the Swiss National Bank undertook a further series of measures to combat this trend, including the encouragement of capital exports and provisions concerning interest rates and liquidity. In addition, the government took steps to improve the possibilities afforded to export-oriented industries and the hotel trade with regard to exchange guarantees. On October 1, 1978, the National Bank decided to abandon setting norms for money supply growth and to concentrate on stabilizing the exchange rate instead. This policy remained in effect until 1981.

In 1982 and 1983, the Swiss National Bank successfully returned to a monetary policy aimed at controlling the rate of growth of the money supply. The bank has stand-by authority to reinstitute capital controls, but they are now held in abeyance.

Japan. Japan introduced temporary capital controls in the late 1970s in order to stabilize the value of the yen following sharp fluctuations. In early 1978, an appreciation was expected, and the government introduced capital controls to reduce net inflows of foreign capital. These controls were later relaxed, but by early 1980, the government believed that the yen had weakened excessively, and therefore introduced new measures to induce net inflows to strengthen the yen. Since December 1980, all transactions in foreign currency can proceed unless expressly forbidden. Capital movements are now virtually free of formal controls.

U.S. Experience with Capital Controls

In the 1960s, when fixed exchange rates were in force, worsening trade deficits made the dollar's value difficult to defend and led the U.S. government to impose three strict controls on capital outflows in an effort to strengthen the dollar and stem the loss of official reserves. This was the opposite of the current situation, in which capital inflows have led to the dollar's appreciation. In September 1964, the Congress enacted the Interest Equalization Tax (IET), an excise tax on purchases of new or outstanding foreign stocks and bonds by U.S. residents, which lowered the rate of return to U.S. purchasers of foreign assets by an equivalent of 1 percentage point.

While the IET had some initial success in reducing foreign borrowing in the United States, the tax was effectively evaded through foreign lending by U.S. financial institutions and direct foreign investment by U.S. corporations.

Thus, the government introduced two new measures in 1965 to restrict further capital exports. The Foreign Credit Restraint Program (FCRP) restricted the right of U.S. banks and related financial institutions to extend loans to foreign borrowers or even to U.S. firms for foreign purposes. Initially, the Federal Reserve requested that banks limit their increase in claims at the start of the year. In addition, the Foreign Direct Investment Regulations (FDIR) sought to limit direct investment by U.S. firms through voluntary guidelines. The Department of Commerce asked large nonfinancial corporations to make a maximum effort to expand their net payments balances and to repatriate liquid funds. In December 1965, corporations were asked to limit their average annual direct investment outflows, including reinvestment earnings, for 1965-1966 to specified industrial countries to no more than 135 percent of the average annual flow in 1962-1964.

The further erosion of the U.S. balance of payments position in the later 1960s led the government to strengthen its capital control policies. The voluntary guidelines for direct investment abroad became mandatory, and a complete moratorium was placed on further investment in Western Europe.

These controls greatly reduced the accessibility of U.S. financial markets to most foreign borrowers, but they provided no long-term solution to the balance of payments difficulties faced by the United States in the later 1960s, in part because the financial activities of U.S. multinational corporations often did not fall within the purview of domestic regulation. Moreover, controls contributed to the rise of Euromarkets for the U.S. dollar which progressively reduced the ability of policymakers to impose capital flow restraints.

U.S. capital controls were permanently removed in 1974, following the end of the system of fixed exchange rates. This change in exchange rates eliminated the original justification for the controls.

Implications of Control Experience

The experience of other nations with direct capital controls suggests severe administrative difficulties. For example, in the early 1970s, West Germany established special ratios for the growth of bank liabilities to nonresidents,

together with other measures to restrict domestic bank liquidity. But from January 1970 until May 1971, net foreign exchange inflows nevertheless swamped declines in domestic credit, and the banks' free liquidity reserves actually increased in spite of these restrictive measures. Attempts were made to tighten controls further, but banks could circumvent these measures through legal means nonetheless. Moreover, there remained the problem of nonbank enterprises that still sought to acquire capital abroad. The only way to forestall this possibility completely would have been to require approval for all transactions of all banks and nonbanks, whether for the sale of equities, bonds, real estate, or any other asset. But doing so would have posed an impossible administrative burden. In the end, West Germany opted to rescind its controls and adopt flexible exchange rates. The West German experience demonstrates that, to maintain effectiveness, exchange controls must grow ever more complex.

For the United States, establishing an effective system of capital controls would be immeasurably more difficult. A substantial portion of transactions in U.S. dollar assets takes place abroad, outside the reach of U.S. authorities. Even if the United States could effectively bar U.S. residents from undertaking transactions in U.S. assets abroad, foreign residents could continue these transactions, with the same effect on the exchange rate. The reason for this is that exchange rates are determined by the world demand and world supply of currencies. Demands for dollars will have the same effect on the exchange rate, whether they originate within the United States or in foreign financial markets. If the Federal Reserve were to prohibit nonresident deposits in the United States, foreign portfolio holders who desired dollar assets would need only resort to foreign markets to acquire these dollars.

The Role of Euromarkets

Euromarkets--offshore markets for liquidity, bonds, or commercial paper in any currency--are essentially free from all direct control by individual governments and international organizations. The largest component of Euromarkets is "Eurocurrencies," such as Eurodollars. These are large time deposits that are placed in banks outside the country whose currency is being deposited and that are subsequently relent. Thus, the Eurodollar market makes possible the creation of dollar-denominated securities completely outside the direct control of U.S. monetary authorities.

Table 1 displays the spectacular rise of the Eurocurrency market since 1970. Gross market size is measured by the U.S. dollar value of all deposit liabilities of Eurobanks. Net market size, which excludes interbank deposits, provides a more accurate picture of new liquidity afforded by Euromarkets.

TABLE 1. THE GROWTH OF THE EUROCURRENCY AND EURODOLLAR MARKETS, 1970-1984 (In billions of dollars)

Year	Eurocurrency		Eurodollar	
	Gross	Net	Gross	Net
1970	115	65	75	42.4
1971	150	85	116	65.7
1972	210	110	164	85.9
1973	315	160	233	118.3
1974	395	220	300	167.1
1975	485	255	378	198.7
1976	595	320	562	296.2
1977	740	390	562	296.2
1978	950	495	703	366.3
1979	1,220	615	887	477.1
1980	1,578	813	1,193	614.6
1981	1,954	1,018	1,539	801.8
1982	2,168	1,152	1,741	925.1
1983	2,278	1,244	1,846	1,008.1
1984	2,383	1,273	1,949	1,041.2

SOURCE: Morgan Guaranty Trust.

NOTE: Data for 1983 and 1984 are December figures. Statistics from 1970 through 1979 not strictly comparable to statistics from 1980 through 1984. The net market size for the 1980-1984 period is prorated from the ratio of net market size to gross liabilities of the international banking market.

Between 1970 and 1980, the net market size of Eurocurrencies grew from $65 billion to $813 billion. In 1980 the net market size of the Eurodollar market was $614.6 billion. Between 1980 and December 1984, the Eurocurrency market nearly doubled in size. By December 1984, the net Eurodollar market amounted to $1,041.2 billion, which was 80 percent of the net market size of the total Eurocurrency market of $1,273 billion, or approximately half of the standard M-2 money aggregate in the United States. 5/ The gross market size of the Eurodollar market attained nearly $2 trillion by the end of 1984.

The growing Euromarket has profound implications for the likely effectiveness of capital controls. International financial markets have become far more integrated since 1970, and the very magnitude of these financial markets now approaches that of domestic financial markets. Attempts to control only one half of the total market for dollars are bound to end in failure, since market participants can simply shift their activities to the Euromarkets. The very size and depth of these markets may preclude the possibility of effective controls that focus on domestic markets alone.

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5. M-2 is equal to the sum of M-1 (currency, travelers checks, demand deposits and other checkable deposits) plus overnight repurchase agreements issued by all commercial banks, money market deposit accounts, savings and small-denomination time deposits, and balances in money market mutual funds. It also includes overnight Eurodollars issued to U.S. residents by foreign branches of U.S. banks, but these amount to only 1 percent of the total Eurodollar market.